

2. (Once Amended) The receiver of claim 1 wherein the switchable voltage supply circuit is coupled to an input/output pad supply voltage and selects the differential receiver supply voltage that is a higher voltage than the I/O pad supply voltage.

4. (Once Amended) The receiver of claim 1 wherein the differential receiver receives a first reference voltage on a first differential input and the input voltage on a second differential input and wherein the switchable voltage supply circuit selects the differential receiver supply voltage for the single gate oxide differential receiver to be a voltage level higher than the maximum voltage level of the input voltage.

7. (Once Amended) The receiver of claim 1 wherein the single gate oxide differential receiver includes a transistor operatively coupled to an input transistor of a single gate differential input stage having a gate coupled to a first reference voltage, a source coupled to the single gate oxide differential receiver supply voltage, a drain coupled to a drain of the input transistor that receives the input signal.

10. (Twice Amended) An integrated differential receiver for an input/output pad comprising:

a single gate oxide differential receiver that receives a first reference voltage on a first differential input and an input voltage on a second differential input;

a switchable voltage supply circuit operatively coupled to the single gate oxide differential receiver, switchable through at least one control signal to select a differential receiver supply voltage for the single gate oxide differential receiver wherein at least one of the selected receiver supply voltages is a voltage level higher than a maximum voltage level of the input voltage; and

an isolation output buffer operatively coupled to an output of the differential receiver and to core logic.

12. (Once Amended) The receiver of claim 10 wherein the switchable voltage supply circuit is operatively responsive to at least two control signals.

13. (Once Amended) The receiver of claim 10 wherein the single gate oxide differential receiver includes a transistor, operatively coupled to an input transistor of a single gate differential input stage having a gate coupled to a first reference voltage, a source coupled to the single gate oxide differential receiver supply voltage, a drain coupled to a drain of the input transistor that receives the input signal.

14. (Twice Amended) A method for controlling a voltage supply for a differential receiver comprising the steps of:

providing either of at least an I/O pad supply voltage or a reference supply voltage for a single gate oxide differential receiver based on a control signal such that the reference supply voltage is selected as the differential receiver supply voltage when the control signal indicates a maximum input signal voltage to be less than the reference supply voltage; and

providing the I/O pad supply voltage as the differential receiver supply voltage when the control signal indicates the maximum input signal voltage to be greater than the referenced supply voltage.

22. (New) An integrated differential receiver for an input/output pad comprising:

a single gate oxide differential receiver that receives an input voltage; and

a switchable voltage supply circuit and operatively coupled to the single gate oxide differential receiver,

wherein the switchable voltage supply circuit provides either of at least an I/O pad supply voltage or a reference supply voltage for the differential receiver based on the control signal such that the reference supply voltage is selected as a differential receiver supply voltage when the control signal indicates a maximum input signal voltage to the single gate oxide differential receiver to be less than the reference supply voltage, and wherein the switchable voltage supply circuit provides the I/O pad supply voltage as the differential receiver supply voltage when the control signal indicates a maximum input signal voltage to be greater than the reference supply voltage.